AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A multilayer ceramic component comprising:

~~with~~ a stack ~~of alternating~~ comprising ceramic layers ~~(KS)~~ and electrode layers interspersed among the ceramic layers, ~~that serve as~~ the electrode layers containing copper, the electrode layers comprising first and second internal electrodes[[,]]; and

~~wherein the internal electrodes (IE1, IE2) are connected to~~ first and second external contacts ~~(AK1, AK2), which are arranged~~ on ~~opposite~~ different ~~external~~ sides of the stack, the first and second external contacts containing copper, the first and second external contacts being substantially perpendicular to the ceramic layers and electrode layers;

~~multilayer structure,~~

wherein the first internal electrode is connected to the first external contact and the second internal electrode is connected to the second external contact, the first and second internal electrodes overlapping each other at a plane intersecting the stack;

~~wherein the internal electrodes that are connected to different external contacts are in interlocking engagement with one another, wherein the electrode layers contain copper, characterized in that the external contacts (AK1, AK2) contain metallic copper,~~

wherein in ~~the boundary area that lies~~ areas adjacent to boundaries ~~the boundary surface~~ between the first and second external contacts and the ceramic layers, the first and

second external contacts are not oxidized and ~~the~~ material ~~of~~ comprising the ceramic layers is not diminished; and ~~reduced,~~

wherein ~~the~~ a bonding strength of the external contacts ~~on~~ to the stack exceeds 50N.

2. (Currently Amended) The multilayer ceramic component ~~according to~~ of claim 1, ~~in which~~ wherein the first and second external contacts ~~(AK1, AK2)~~ contain a ~~proportion of~~ ceramic.

3. (Currently Amended) The multilayer ceramic component ~~according to~~ of claim 1 ~~or 2~~, ~~in which~~ wherein the first and second internal electrodes contain a ~~proportion of~~ ceramic.

4. (Currently Amended) The multilayer ceramic component ~~according to~~ of claim 2 ~~or 3~~, ~~in which~~ wherein the ceramic ~~proportion is ≤~~ comprises less than or equal to 50 m% of each of the first and second external contacts.

5. (Currently Amended) The multilayer ceramic component ~~according to~~ of claim 4, ~~in which~~ wherein the ceramic ~~proportion lies~~ comprises between 10 m% and 50 m% of each of the first and second external contacts.

6. (Currently Amended) The multilayer ceramic component of claim 2 ~~according to one of claims 2 through 5, in which~~ wherein the ceramic ~~proportion contains~~ comprises ceramic particles having an average grain size of between 0.2 μm and 0.6 μm.

7. (Currently Amended) The multilayer ceramic component of claim 1 ~~according to one of claims 1 through 6, which is produced from~~ comprising ceramic green films that contain a thermohydrolytically degradable binding agent.

8. (Currently Amended) The multilayer ceramic component of claim 1 ~~according to one of claims 1 through 7, in which~~ wherein the ceramic layers comprise a ferroelectric perovskite ceramic ~~of the~~ having a general composition of ABO_3.

9. (Currently Amended) The multilayer ceramic component ~~according to~~ of claim 8, ~~in which~~ wherein the perovskite ceramic is of ~~the~~ a PZT type $Pb(Zr_xTi_{1-x})O_3$; and

wherein $1 \geq x \geq 0$.

10. (Currently Amended) The multilayer ceramic component of claim 1 ~~according to one of claims 1 through 9, in which the~~ wherein a thickness of ~~the~~ each of the first and second external contacts ~~lies~~ is between 10 μm and 20 μm.

11. (Currently Amended) A method for producing a ~~component according to one of claims 1 through 10,~~ multilayer ceramic component, the multilayer ceramic component

comprising a stack comprising ceramic layers and electrode layers interspersed among the ceramic layers, the electrode layers containing copper, the electrode layers comprising first and second internal electrodes, the method comprising:

applying first and second external contacts to different sides of the stack, the first and second external contacts containing copper, the first and second external contacts being substantially perpendicular to the ceramic layers and electrode layers,

wherein applying comprises debindering and sintering metal paste to form the first and second external contacts;

wherein ~~in which the~~ debindering is ~~conducted~~ performed at a temperature of [[≤]] less than or equal to 300° C in a nitrogen stream with ~~the addition of~~ water vapor; ~~, and in this manner the debindering process is completed~~,

wherein, at least during ~~the~~ debindering ~~process~~, ~~the~~ an oxygen partial pressure does not drop below a level of p_{min}, at which ~~the~~ ceramic contained in the ceramic layers begins ~~will begin~~ to ~~reductively~~ degrade[[,]];

wherein the oxygen partial pressure does not exceed a level of p_{max}, at which ~~the~~ metallic copper will begin to oxidize; ~~at the given temperature~~

wherein the first internal electrode is connected to the first external contact and the second internal electrode is connected to the second external contact, the first and second internal electrodes overlapping each other at a plane intersecting the stack,

wherein in areas adjacent to boundaries between the first and second external contacts and the ceramic layers, the first and second external contacts are not oxidized and material comprising the ceramic layers is not diminished, and

wherein a bonding strength of the external contacts to the stack exceeds 50N;

12. (Currently Amended) The method ~~according to~~ of claim 11,

wherein p_{min} corresponds to ~~the~~ an equilibrium point for Cu/Cu_2O[[,]]; and

wherein p_{max} corresponds to ~~the~~ an equilibrium point for Pb/PbO or $Pb/PbTiO_3$.

13. (Currently Amended) The method ~~according to~~ of claim 11 ~~or 12~~, ~~in which to produce external contacts a~~ wherein the metal past contains copper-~~containing metal paste comprising a copper content of >~~ at greater than 70 m%[[,]]; and

wherein applying comprising using a glass ~~frit~~ flow and an organic binder ~~is used~~.

14. (Currently Amended) The method ~~according to~~ of claim 13, ~~in which an acrylic resin binder is used as~~ wherein the organic binder comprises an acrylic resin binder.

15. (Currently Amended) The method according to claim 13 ~~or 14~~, ~~in which~~ wherein the glass flow contains ~~essentially~~ PbO and SiO_2.

16. (Currently Amended) The method of claim 13, wherein applying further comprises firing the ~~according to one of claims 13 through 15, in which the copper-containing~~ metal paste ~~is fired on~~ at a temperature between 700 and 860° C.

17. (Currently Amended) The method ~~according to~~ of claim 16, ~~in which the~~ wherein debindering and ~~the~~ firing ~~on of~~ the ~~copper-containing~~ metal paste are performed ~~on~~ using a copper base layer.

18. (Currently Amended) The method of claim 13, ~~according to one of claims 13 through 17, in which~~ wherein the ~~copper-containing~~ metal paste is applied ~~by means of~~ via a screen printing process.

19. (Currently Amended) A method for producing a multilayer ceramic component with alternating ceramic layers and internal electrode layers, comprising:

~~in which a ceramic mass is used to create~~ producing the ceramic layers using a ceramic mass[[,]]; and

producing the internal electrode layers using ~~in which~~ a metal paste that contains a portion of a chemically active additive; ~~is used to create the internal electrode layers,~~

wherein the chemically active additive reacts chemically with at least one environmental component ~~in its environment~~ other than ~~the~~ a metal portion of the metal paste.

20. (Currently Amended) The method ~~according to~~ of claim 19, ~~in which a chemically active ceramic powder is used as~~ wherein the chemically active additive comprises a chemically active ceramic powder.

21. (Currently Amended) The method ~~according to~~ of claim 19 ~~or 20~~, ~~in which the components of the environment are selected from~~ wherein the at least one environmental component comprises oxygen, at least one component of the ceramic mass, and a binder or solvent that is contained in the metal paste or the ceramic mass.

22. (Currently Amended) The method of claim 19 ~~according to one of claims 19 through 21~~, ~~in which lead-containing~~ wherein the ceramic mass contains lead; and ~~is used,~~ wherein as a result of a chemical reaction between the chemically active additive and ~~it's~~ an environment, oxygen is released and/or Pb and/or Cu are bonded.

23. (Currently Amended) The method of claim 19 ~~according to one of claims 19 through 22~~, ~~in which at least one additive is used as~~ wherein the chemically active additive~~,~~ ~~selected from the group of~~ comprises at least one of (Zr, Ti)O_2, MgO and BaO_2.

24. (Currently Amended) The method of claim 19 ~~according to one of claims 19 through 23~~, ~~in which a non-precious metal is used as the metal portion of~~ wherein the metal paste contains a non-precious metal.

25. (Currently Amended) The method ~~according to~~ of claim 24, ~~in which Cu or Ni is used as the metal portion of~~ wherein the metal paste contains Cu or Ni.

What is claimed is:

1. Multilayer ceramic component with a stack of alternating ceramic layers (KS) and electrode layers that serve as internal electrodes, wherein the internal electrodes (IE1, IE2) are connected to external contacts (AK1, AK2), which are arranged on opposite external sides of the stack, perpendicular to the multilayer structure, wherein the internal electrodes that are connected to different external contacts are in interlocking engagement with one another, wherein the electrode layers contain copper,

characterized in that

the external contacts (AK1, AK2) contain metallic copper,

wherein in the boundary area that lies adjacent to the boundary surface between the external contacts and the ceramic layers the external contacts are not oxidized and the material of the ceramic layers is not reduced,

wherein the bonding strength of the external contacts on the stack exceeds 50 N.

2. Component according to claim 1, in which the external contacts (AK1, AK2) contain a proportion of ceramic.

3. Component according to claim 1 or 2, in which the internal electrodes contain a proportion of ceramic.

4. Component according to claim 2 or 3, in which the ceramic proportion is ≤ 50 m%.

5. Component according to claim 4, in which the ceramic proportion lies between 10 and 50 m%.

6. Component according to one of claims 2 through 5, in which the ceramic proportion contains ceramic particles having an average grain size of between 0.2 and 0.6 μm.

7. Component according to one of claims 1 through 6, which is produced from ceramic green films that contain a thermohydrolytically degradable binding agent.

8. Component according to one of claims 1 through 7, in which the ceramic layers comprise a ferroelectric perovskite ceramic of the general composition ABO_3.

9. Component according to claim 8, in which the perovskite ceramic is of the PZT type Pb $(Zr_xTi_{1-x})O_3$ wherein $1 \geq x \geq 0$.

10. Component according to one of claims 1 through 9, in which the thickness of the external contacts lies between 10 and 20 μm.

11. Method for producing a component according to one of claims 1 through 10, in which the debindering is conducted at a temperature of ≤ 300° C in a nitrogen stream with the addition of water vapor, and in this manner the debindering process is completed,

wherein, at least during the debindering process, the oxygen partial pressure does not drop below a level of p_{min}, at which the ceramic will begin to reductively degrade,

wherein the oxygen partial pressure does not exceed a level of p_{max}, at which the metallic copper will begin to oxidize at the given temperature.

12. Method according to claim 11,

wherein p_{min} corresponds to the equilibrium point for Cu/Cu_2O,

wherein p_{max} corresponds to the equilibrium point for Pb/PbO or $Pb/PbTiO_3$.

13. Method according to claim 11 or 12, in which to produce external contacts a copper-containing metal paste comprising a copper content of > 70 m%, a glass frit and an organic binder is used.

14. Method according to claim 13,in which an acrylic resin binder is used as the organic binder.

15. Method according to claim 13 or 14, in which the glass flow contains essentially PbO and SiO_2.

16. Method according to one of claims 13 through 15, in which the copper-containing metal paste is fired on at between 700 and 860° C.

17. Method according to claim 16, in which the debindering and the firing on of the copper-containing metal paste are performed on a copper base layer.

18. Method according to one of claims 13 through 17, in which the copper-containing metal paste is applied by means of a screen printing process.

19. Method for producing a multilayer ceramic component with alternating ceramic layers and internal electrode layers,

in which a ceramic mass is used to create the ceramic layers,

in which a metal paste that contains a portion of a chemically active additive is used to create the internal electrode layers,

wherein the chemically active additive reacts chemically with at least one component in its environment other than the metal portion of the metal paste.

20. Method according to claim 19, in which a chemically active ceramic powder is used as the chemically active additive.

21. Method according to claim 19 or 20, in which the components of the environment are selected from oxygen, at least one component of the ceramic mass and a binder or solvent that is contained in the metal paste or the ceramic mass.

22. Method according to one of claims 19 through 21, in which lead-containing ceramic mass is used,

wherein as a result of a chemical reaction between the chemically active additive and its environment, oxygen is released and/or Pb and/or Cu are bonded.

23. Method according to one of claims 19 through 22, in which at least one additive is used as the chemically active additive, selected from the group of $(Zr, Ti)O_2$, MgO and BaO_2.

24. Method according to one of claims 19 through 23, in which a non-precious metal is used as the metal portion of the metal paste.

25. Method according to claim 24, in which Cu or Ni is used as the metal portion of the metal paste.